

Identify Basic Hand Tools and Use Them Safely

Introduction

Today, there seems to be few opportunities for either young men or women to learn from their parents about basic hand tools and how to make basic repairs. Therefore, the prospect of using basic hand tools can be intimidating to both genders. In this activity, students will learn about basic hand tools, their uses, and how to use them safely to help them gain confidence in using common tools. Refer to the strategies below to adapt this activity for students in various grades.

Objectives

Students will be able to:

- Identify basic hand tools.
- · Describe uses of basic hand tools.
- Use basic hand tools safely.

Preparation

About two weeks before this activity, make arrangements to borrow 20-25 basic hand tools from program instructors, family, and/or friends (See sample list on next page.). Borrow resource books on tools to help students locate information on tool names, their uses, and tool safety. You may also want to invite a trades instructor or tool company representative to join the class as they study basic hand tools. Allow students at least a week to study the tools and resources and to ask questions about tool use and safety. To enhance this activity you may want students to identify a trade they are interested in so they can explore tools required for that particular trade.

Strategies

- Ask students to bring in antique tools for display. Using an unfamiliar old tool, you can
 organize a mystery tool contest in which students submit written guesses as to the tool's
 name and use. The winner could receive a certificate or new tool donated by the tool
 company representative.
- Show students the actual hand tools and pass them around the class so students can get
 a feel (size and weight) for each tool. Or, lay them out on tables for viewing by students.
 Attach to each tool a label that is visible when the tool is picked up or passed around.
- Ask a trades instructor or trades students to demonstrate how to use basic hand tools. Have students take notes for later review.
- If working with younger students, have them create a tool poster by drawing three of the
 tools, listing their uses, and noting any safety procedures to follow when using those tools.
 These could be posted in the classroom to recognize students for their work and to
 reinforce the activity.
- Make the tool activities as much fun as possible by letting students work with the tools. Collect various scraps of wood, nails, screws, bolts, etc. in advance.
- For older students, have them research tool prices (in catalogs, at hardware stores, on the Internet) and estimate how much it would cost for a basic tool set. Tool lists are available from trade instructors, apprenticeship programs and employers.
- Discuss with students the importance of tool safety and help them understand their responsibility in keeping the work area safe.

Evaluation

Number each tool that you would like to include in the student assessment and place them on long tables in the classroom. Provide students with a piece of paper and have them write down the corresponding number with the tool name and its use(s). For older students, have them explain the importance of following safety guidelines when working with hand tools. Younger students can write in their own words how they would use tools safely.

You may also want to include a research activity on estimating tool costs as part of the older students overall evaluation for this activity. Use online tool catalogs as a resource.





Basic Hand Tools

- Straight claw hammer
- Ball peen hammer
- Nail puller
- Standard slot screwdriver
- Phillips head screwdriver
- Combination wrench
- Adjustable wrench
- Hex (Allen) wrench
- Socket wrench
- Slip joint pliers
- Needle nose pliers
- Pliers wrench (vise grips)
- Straight snips

- Handsaw
- Hacksaw
- Miter saw
- Center punch
- Chisel
- Pry bar
- Flat file
- Round file
- Level
- Rule
- Scratch awl
- Putty knife







Adapted from Lesson 1, "Hand Tools and Basic Tool Safety," *Orientation to Nontraditional Occupations for Women*, 2000, Ohio Department of Education, Columbus, OH.